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Title: MULTIPLE SHOP SOCKET TOOL

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CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a continuation-in-part application of Serial No. 08/917,894 which will be abandoned.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable

TECHNICAL FIELD

This invention relates in general to impact and ratchet type socket tools.

BACKGROUND OF THE INVENTION

Socket tools of today take up a large amount of space in which a person is constantly searching through their tool box for the certain size socket to properly handle a job. Sockets of today come in numerous amounts of different standard and metric sizes which makes working on projects that have to be done quickly more difficult to accomplish in a short amount of time.

SUMMARY OF THE INVENTION

This invention is directed to ratchet and impact socket tools which are used

to tighten and loosen nuts, bolts and lug nuts. The newly invented sockets are built with two to three sizes in one that will eliminate a lot of frustrations of searching for the socket size in need. It also makes a great space-saving, easy-to-carry socket set. With this socket you can easily tighten or loosen three or more different sizes of bolts or nuts without the costly time of searching and changing sockets for every size.

The invention is a socket wrench consisting of different hexagon-shaped tools fitted or nested in such a way so they can move inside of one another being biased by springs and retained pins. Each hexagon tool is pressured by its own individual compression spring. The hexagon tool has small roll pin holes and slots that allow movement back and forth with the help of roll pins restricting movement too far one way or the other and keeping the multiple socket tool in complete working form.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of a three-sized multiple socket tool.

Figure 2 is an exploded view of the three-sized multiple socket tool.

Figure 3 is an exploded view of a smaller two-sized multiple socket tool.

Figure 4 is a side section view of a multiple socket tool having four socket sizes.

DETAILED DESCRIPTION OF THE INVENTION

A perspective view of a large three-sized multi socket is illustrated in Figure 1. Referring to Figure 2, small roll pin 1 fits tightly into hole 2 which also extends down through slot 7 that allows the middle hexagon tool 8 to slide back and forth inside of the outer socket 3. The large compression spring 5 is fitted behind the outer hexagon tool 8 that is nested inside socket 3 that keeps pressure applied to the outer hexagon tool 8. Small compression spring 6 is smaller than spring 5 but its purpose is the same except that it pushes on the inner hexagon tool 11. Roll pin 10 fits tightly into hole 9 which extends into slot 12 and allows the outer hexagon tool 11 to move back and forth inside of middle hexagon tool 8. The square drive aperture 4 is for the application of an air gun or ratchet wrench device.

Figure 3 is a smaller two-sized multiple socket tool with only one compression spring 16 and one hexagon tool.

Figure 3 illustrates a hardened metal multiple socket tool 13 which is used for tightening or loosening various sizes of nuts and bolts. The multiple sockets can be attached on an impact gun, ratchet wrench or any other socket attachment tool by inserting the attachment into aperture 19. As described above, roll pin 14 fits in aperture 15 and engages slot 18.

Figure 4 illustrates a multiple socket tool 25 having four sockets within

body 27 that, for example, could range from 7/8 inches up to 15/16 inches in 1/16 inch increments. This section view shows the square-sectioned driving tool 30 (in phantom) inserted within a first end 35 of tool 25 and a driven bolt 40 within a second end 45. The tool 30 inserts with square aperture 47. The first end smaller socket 50 is contained within the first end larger socket 55. Small spring 60 biases smaller socket to the left end extended position and is restrained by first end pin 65 in the first end slot 70.

The second end 45 of tool 25 illustrates engagement of second end larger socket 75 with the bolt 40. The second smaller socket 80 is in a retracted position against large spring 85. When the tool 25 is removed from the bolt 40, large spring 85 restores the socket 80 to the right and is retained by second end pin 90 in second end slot 95. It can be seen that the bolt and the driving tool can be reversed to accommodate four different size bolts.